Remarks

A. Pending Claims

Claims 1691-1749 are pending.

B. The Claims Are Not Obvious Over Eastlund et al. In View of Van Egmond or Bell et al., and Rose Pursuant To 35 U.S.C. §103(a)

Claims 1691-1749 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,716,960 to Eastlund et al. (hereinafter "Eastlund") in view of U.S. Patent No. 5,065,818 to Van Egmond (hereinafter "Van Egmond") or U.S. Patent No. 4,382,469 to Bell et al. (hereinafter "Bell"), and European Patent Application 0130671 to Rose (hereinafter "Rose"). Applicant respectfully disagrees with these rejections.

To reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner et al.*, 379 F.2d 1011, 154 U.S.P.Q. 173, 177-178 (C.C.P.A. 1967). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002). *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), MPEP § 2143.01.

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). *In re Kotzab* 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000).

Whether or not "a particular combination might be 'obvious to try' is not a legitimate test of patentability." *Id.* at 1599, citing *In re Geiqer*, 815 F.2d 868, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) and *In re Goodwin*, 576 F.2d 375, 377, 198 USPQ 871, 881 (CCPA 1981). Consequently, it is not permissible for the Examiner to "use hindsight reconstruction to pick and chose among isolated disclosures in the prior art to deprecate the claimed invention." Id. at 1600.

An obvious rejection based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, is not proper and the case of obviousness cannot be properly made. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Claim 1691 describes a combination of features including:

> a heater well extending from a surface of the earth through an overburden of the formation and into a hydrocarbon containing layer in the formation; ...
> wherein the system is configured to provide heat to the hydrocarbon containing formation such that sufficient heat transfers from at least one of the electrical conductors to hydrocarbons in the hydrocarbon containing formation to at least mobilize some hydrocarbons in the formation.

Claim 1710 describes a combination of features including:

> a heater well extending from a surface of the earth through an overburden of the formation and into a hydrocarbon containing layer in the formation; ...
> wherein the system is configured to provide heat to the hydrocarbon containing formation such that sufficient heat transfers from at least one of the electrical conductors to hydrocarbons in the hydrocarbon containing formation to at least mobilize some hydrocarbons in the formation.

Claim 1729 describes a combination of features including:

> providing AC at a frequency between about 100 Hz and about 1000 Hz to one or more electrical conductors located in a heater well extending from a surface of the earth through an overburden of the formation and into a hydrocarbon containing layer in the formation, wherein providing the AC produces an electrically resistive heat output from the electrical conductors, at least one of the electrical conductors comprising one or more electrically resistive ferromagnetic sections; ...
>
> allowing heat to transfer from the electrical conductors to hydrocarbons in the hydrocarbon containing layer to at least mobilize some hydrocarbons in the layer.

Applicant submits that the cited art does not appear to teach or suggest at least the above-quoted combinations of features in claims 1691, 1710, and 1729.

The terms "overburden" and "hydrocarbon containing layer" disclosed in the claims are described in Applicant's Specification. For example, these terms are described in the following sections of Applicant's Specification:

> A "formation" includes one or more hydrocarbon containing layers, one or more non-hydrocarbon layers, an overburden, and/or an underburden. An "overburden" and/or an "underburden" includes one or more different types of impermeable materials. For example, overburden and/or underburden may include rock, shale, mudstone, or wet/tight carbonate (i.e., an impermeable carbonate without hydrocarbons). In some embodiments of in situ conversion processes, an overburden and/or an underburden may include a hydrocarbon containing layer or hydrocarbon containing layers that are relatively impermeable and are not subjected to temperatures during in situ conversion processing that results in significant characteristic changes of the hydrocarbon containing layers of the overburden and/or underburden. For example, an underburden may contain shale or mudstone. In some cases, the overburden and/or underburden may be somewhat permeable. (page 39, lines 4-15);
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> Each hydrocarbon containing layer of a formation may have a potential formation fluid yield or richness. The richness of a hydrocarbon layer may vary in a hydrocarbon layer and between different hydrocarbon layers in a formation. Richness may depend on many factors including the conditions under which the hydrocarbon containing layer was formed, an amount of hydrocarbons in the layer, and/or a composition of hydrocarbons in the layer. Richness of a hydrocarbon layer may be estimated in various ways. (page 53, lines 12-17); and
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> Hydrocarbon containing formations (e.g., coal formations) may contain two or more layers of hydrocarbons. Hydrocarbon layers may be coal seams.

> Hydrocarbon layers may be separated by layers of material containing little or no producible hydrocarbons. The separating layers may function as natural barriers between hydrocarbon layers. Barriers may be formed adjacent to or in one or more of the hydrocarbon layers to define treatment areas. Barriers in different hydrocarbon layers may be formed at one time or at different times, as desired. Barriers may isolate one hydrocarbon layer from the rest of the formation, including other hydrocarbon layers. (page 67, lines 1-8).

Eastlund does not, for example, teach or suggest the combination of features that includes a heater well extending from a surface of the earth through an overburden of the formation and into a hydrocarbon containing layer and **transferring heat to the hydrocarbon containing layer** to at least mobilize hydrocarbons in the layer.

Eastlund appears to teach or suggest heating primarily within the wellbore. As shown in FIG. 1 and FIG. 7A of Eastlund, fluid production is through perforations 12 or 113, which are located in the hydrocarbon containing layer of the formation. No portion of the heater, however, is shown to be near the perforations and thus near or in the hydrocarbon containing layer. In fact, the bottom of the heater (shown by contactors 18 in FIG. 1 and sinker bar 115 in FIG. 7A) is shown to be distantly separated from the perforations in view of the "break lines" shown in FIG. 1 and FIG. 7A.

The distant separation of the heaters from the hydrocarbon containing layers in Eastlund is understandable in view of the fact that the Eastlund was only trying to heat fluids **in upper portions of the well**, as opposed the hydrocarbon containing layer itself. Eastlund states that "Normally, more heat is needed at the upper level of a well." (Eastlund, column 9, lines 62-63). More heat is needed in the upper level of the well because fluids cool as thy rise inside the well to the surface (the lower portion of a well is generally hotter than the upper portion of a well since the earth's temperature increases as depth increases). Thus, Eastlund does not provide heat to the lower portions of the well that are closer to the hydrocarbon containing layer, where solids formation are much less likely to occur (since the lower portions of the well are deeper and hence hotter).

Stated another way, in Eastlund, the fluids in the hydrocarbon containing layer are indicated as being already mobilized since Eastlund indicates that such fluids flow through the perforations and into the wellbore. Such fluids are not heated until they have risen to a sufficient

level in the wellbore such that they are cooled (which will occur at upper levels of the wellbore that are closer to the earth's surface). This distance is enough that Eastlund specifically indicated that the heating is distantly separate from the perforations (this distant separation is shown with the "break lines" in the Eastlund FIG. 1 and FIG 7A). Thus, Eastlund does not teach or suggest transferring heat to a hydrocarbon containing layer of the formation and using that heat to mobilize hydrocarbons in the hydrocarbon containing layer.

Van Egmond, to the contrary of Eastlund, states:

> FIG. 1 shows a well, 1, which extends through a layer of "overburden" and zones 1 and 2 of an earth formation. Zone 2 is a zone which is to be heated.
> (Van Egmond, column 3, lines 32-34);
>
> At the interface of the zone which is to be heated, zone 2, and the zone which is not to be heated, zone 1, power supply cables, 1 and 2, are spliced to heater cables, 9 and 10, through splices, 11 and 12. The heating cables extend downward to the bottom of the zone to be heated.
> (Van Egmond, column 3, lines 43-48); and
>
> The uphole ends of the sheathed heating element cables are preferably connected to power supply cables. **Power supply cables** are heat-stable similarly insulated and sheathed cables containing cores having ratios of cross-sectional area to resistance making them capable of transmitting the electrical current flowing through the heating elements **while generating heat at a significantly lower rate**. The **power supply cables** are metal sheathed, mineral insulated, and copper cored, and have cross-sectional areas large enough **to generate only an insignificant amount of heat while supplying all of the current needed to generate the selected temperature in the heated zone**.
> (Van Egmond, column 3, lines 4-16) (Emphasis added)

Applicant submits that there appears to be no suggestion in the references themselves or to one of ordinary skill in the art to combine the teachings of Eastlund and Van Egmond. It is unclear to Applicant how one of ordinary skill in the art might be motivated to combine Eastlund with Van Egmond when Eastlund teaches heating in the overburden of the formation with no heating in the hydrocarbon containing layer of the formation while Van Egmond teaches limiting heat output in the overburden of the formation when heating the heated zone (the hydrocarbon containing layer). In fact, Van Egmond appears to destroy the intent, purpose, and/or function of the Eastlund invention. It appears that the Examiner may be using hindsight reconstruction to

pick and choose among isolated disclosures in the prior art to deprecate Applicant's claimed invention.

Similarly, there appears to be no motivation to combine the teachings of Bell with Eastlund and/or Van Egmond as Bell does not even appear to teach or suggest a heater. Bell appears to teach applying direct current to the formation through electrodes and producing gas electrochemically in the formation. Bell states:

> This invention relates to in situ production of gas from an underground formation of carbonaceous material and in particular to a process in which gas production is achieved by applying a direct electric current to the formation.
> (Bell, column 1, lines 5-9);
>
> The method involves providing an aqueous electrolyte in contact with the carbonaceous material placing at least two electrically conductive elements, constituting an anode and a cathode, in contact with the electrolyte, and passing a controlled amount of electric current from a direct current source through the formation between the electrically conductive elements at a voltage of at least 0.3 volts, thereby producing gas by electro-chemical action within the formation and the accompanying gasification of said carbonaceous material.
> (Bell, column 2, lines 60 to column 3, line 2); and
>
> A current path, represented in the drawing by dashed lines 47, is established between the two electrodes described above by providing an aqueous electrolyte in contact with the formation.
> (Bell, column 4, lines 66 to column 5, line 1).

Bell uses electrodes to provide direct current flow through the formation to electrochemically treat the formation. The electrodes are, in fact, kept below 500 °F using a coolant to prevent heating at or near the electrodes. Thus, Bell does not appear to teach or suggest a heater used to provide heat to the formation through resistive heating of the heater.

In addition, Bell describes using direct current (DC) advantageously over using alternating current (AC) (see, for example, column 7, lines 6-41). Applicant notes that the invention of Rose requires the use of AC (or time-varying electrical current) for the invention to operate correctly. Thus, Bell teaches away from the invention of Rose.

There also appears to be no motivation to combine the teachings of Rose with Eastlund Van Egmond and/or Bell as Rose refers only to heating fluids inside of the device and Rose does not even mention wells or hydrocarbon containing formations. Specifically, Rose states: "It

should be noted that the insulating layer 29 of Fig. 3 has been eliminated to provide a gap between return conductor 27 and ferromagnetic layer 31. This gap insulates such members from one another and may be employed to heat fluids; air, gas, water, or other liquid, for a variety of purposes. Any one of the insulating layers may be removed to accept fluid and in fact, three different fluids may be heated simultaneously to three different temperatures." (Rose, page 17, lines 18-26). Thus, Rose does not appear to teach or suggest transferring heat to a hydrocarbon containing layer of the formation and using that heat to mobilize hydrocarbons in the hydrocarbon containing layer, as described in claims 1691, 1710, and 1729.

In addition, Applicant submits that Eastlund appears to teach away from operating at higher temperatures (for example, at or near the Curie temperatures described by Rose). Eastlund states: "It is believed that the maximum current flows primarily along the inner wall and decreases radially outward from the inner wall of the tubing with very little current flowing along the outer wall of the tubing. For this reason, shorting between the tubing and casing does not significantly affect the heating of the tubing by the current flowing therethrough and of course heat transfer through the liquid medium from the sucker rod." (Eastlund, column 7, lines 23-31). Eastlund also states: "In a test utilizing the system of FIG. 6 the casing and tubing were in electrical contact and shorted at 575 feet and 2,050 feet. The wire extended down in the well to a depth of 800 feet where the wire was shorted to the tubing by a scratcher. Fifty feet of free wire was connected to a source of power delivering 2140 watts from a 120 volt source. Power was controlled by an S.C.R. power controller. After 12.5 hours temperature at 350 feet had increased from 77.degree. F. to 89.degree. F. and at 750 feet had increased from 80.degree. F. to 90.degree. F. This test demonstrated that shorting between the tubing and casing does not substantially reduce the efficiency of the system of FIG. 6." (Eastlund, column 9, lines 21-33).

If, however, the Eastlund device were to operate at the Curie temperature, as taught by the Rose device, electrical current would flow through the entirety of the heater at the Curie temperature and significant current would flow along the **outer** wall of the tubing of the Eastlund device. Having significant electrical current flow on the tubing outer wall, along with shorting between the tubing and the casing, would significantly affect the heating of the tubing. Electrical current would flow between the tubing and casing due to the shorting if the heater were to operate at or near the Curie temperature. Thus, Eastlund teaches away from having electrical

current flowing through the entire heater, as occurs at the Curie temperatures described by Rose. Thus modifying the Eastlund device to operate at the Curie temperatures described by Rose would appear to make the Eastlund device unsatisfactory for its intended purpose as disclosed by the above-quoted requirements for the Eastlund device.

In addition, Eastlund states: "An object of this invention is to electrically heat the tubing of a petroleum well by passing current through the tubing to **prevent formation of solids** such as paraffins." (Eastlund, column 1, lines 47-50) (emphasis added). Modifying the Eastlund device to operate at or near the Curie temperatures described by Rose would appear to render the Eastlund device unsatisfactory for its intended purpose of preventing formation of solids. In fact, operating the Eastlund device at or near the Curie temperatures (which are generally much higher than the temperatures contemplated by Eastlund) may **increase the formation of solids** by increasing the cracking of hydrocarbons (petroleum) inside the tubing, thus leading to coke (solid carbon) formation in the tubing. Thus, Eastlund appears to teach away from operating at or near the Curie temperatures as described by Rose.

For the above reasons, Applicant respectfully requests withdrawal of the obviousness rejection of claims 1691, 1710, and 1729, and the claims dependent thereon.

Applicant submits, in addition, that some of the claims dependent on claims 1691, 1710, and 1729 are separately patentable.

Claims 1692 and 1711 describe combinations of features including: "at least one production well extending into the hydrocarbon containing layer and configured to produce at least some of the mobilized hydrocarbons from the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1692 and 1711, in combination with the other features of the claims.

Claims 1693 and 1712 describe combinations of features including: "wherein at least one electrical conductor transfers heat during use to hydrocarbons in the hydrocarbon containing layer to at least mobilize some hydrocarbons in the layer." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1693 and 1712, in combination with the other features of the claims.

Claims 1694 and 1713 describe combinations of features including: "wherein at least one

electrical conductor transfers heat during use to hydrocarbons in the hydrocarbon containing layer to pyrolyze at least some hydrocarbons in the layer." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1694 and 1713, in combination with the other features of the claims.

Claims 1695 and 1714 describe combinations of features including: "wherein the heater well extends from the surface of the earth through an overburden of the formation into the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1695 and 1714, in combination with the other features of the claims.

Claims 1696 and 1715 describe combinations of features including: "wherein at least one of the ferromagnetic sections heats during use to a temperature of at least about 650 °C." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1696 and 1715, in combination with the other features of the claims.

Claims 1697 and 1716 describe combinations of features including: "wherein the AC supply is coupled to a supply of line current, and wherein the AC supply is configured to provide AC at about three times the frequency of the line current." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1697 and 1716, in combination with the other features of the claims.

Claims 1698 and 1717 describe combinations of features including: "wherein the AC supply is configured to provide AC with a frequency between about 140 Hz and about 200 Hz." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1698 and 1717, in combination with the other features of the claims.

Claims 1699 and 1718 describe combinations of features including: "wherein AC supply is configured to provide AC with a frequency between about 400 Hz and about 550 Hz." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1699 and 1718, in combination with the other features of the claims.

Claims 1700 and 1719 describe combinations of features including: "wherein the ferromagnetic material comprises iron, nickel, chromium, cobalt, tungsten, or a mixture thereof." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1700 and 1719, in combination with the other features of the claims.

Claims 1701 and 1720 describe combinations of features including: "wherein a thickness of the ferromagnetic material is at least about ¾ of a skin depth of the AC at the Curie temperature of the ferromagnetic material." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1701 and 1720, in combination with the other features of the claims.

Claims 1702 and 1721 describe combinations of features including: "wherein the heat output below the selected temperature is greater than about 400 watts per meter of the electrical conductor." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1702 and 1721, in combination with the other features of the claims.

Claims 1703 and 1722 describe combinations of features including: "wherein at least a portion of at least one of the electrical conductors is longer than about 10 m." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1703 and 1722, in combination with the other features of the claims.

Claims 1704 and 1723 describe combinations of features including: "wherein the system is configured to sharply reduce the heat output at or near the selected temperature." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1704 and 1723, in combination with the other features of the claims.

Claims 1705 and 1724 describe combinations of features including: "wherein the system is configured such that the heat output of at least a portion of the system decreases at or near the selected temperature due to the Curie effect." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1705 and 1724, in combination with the other features of the claims.

Claims 1706 and 1725 describe combinations of features including: "wherein the system is configured to apply AC of at least about 70 amps to at least one of the electrically resistive sections." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1706 and 1725, in combination with the other features of the claims.

Claims 1707 and 1726 describe combinations of features including: "wherein at least one of the electrical conductors comprises a turndown ratio of at least about 2 to 1." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1707 and 1726, in combination with the other features of the claims.

Claims 1708 and 1727 describe combinations of features including: "wherein the system is configured to withstand operating temperatures of about 250 °C or above." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1708 and 1727, in combination with the other features of the claims.

Claims 1709 and 1728 describe combinations of features including: "wherein the electrical conductor is configured to automatically provide the reduced amount of heat above or near the selected temperature." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1709 and 1728, in combination with the other features of the claims.

Claim 1730 describes a combination of features including: "producing at least some of the mobilized hydrocarbons from the layer through a production well extending into the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1730, in combination with the other features of the claim.

Claim 1731 describes a combination of features including: "wherein the transferred heat pyrolyzes at least some hydrocarbons in the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1731, in combination with the other features of the claim.

Claim 1732 describes a combination of features including: "producing at least some of the pyrolyzed hydrocarbons from the layer through a production well extending into the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1732, in combination with the other features of the claim.

Claim 1733 describes a combination of features including: "wherein the heater well extends from the surface of the earth through an overburden of the formation into the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1733, in combination with the other features of the claim.

Claim 1734 describes a combination of features including: "wherein at least one of the ferromagnetic sections heats to a temperature of at least about 650 °C." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1734, in combination with the other features of the claim.

Claim 1735 describes a combination of features including: "providing an initial

electrically resistive heat output when the electrical conductor providing the heat output is at least about 50 °C below the selected temperature, and automatically providing the reduced amount of heat above or near the selected temperature." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1735, in combination with the other features of the claim.

Claim 1736 describes a combination of features including: "providing the AC at about three times the frequency of line current from an AC supply." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1736, in combination with the other features of the claim.

Claim 1737 describes a combination of features including: "providing the AC at a frequency between about 140 Hz and about 200 Hz." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1737, in combination with the other features of the claim.

Claim 1738 describes a combination of features including: "providing the AC at a frequency between about 400 Hz and about 550 Hz." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1738, in combination with the other features of the claim.

Claim 1739 describes a combination of features including: "wherein a thickness of at least one of the ferromagnetic sections is at least about ¾ of a skin depth of the AC at the Curie temperature of the ferromagnetic material." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1739, in combination with the other features of the claim.

Claim 1740 describes a combination of features including: "providing a reduced amount of heat above or near the selected temperature of less than about 400 watts per meter of length of the electrical conductor." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1740, in combination with the other features of the claim.

Claim 1741 describes a combination of features including: "controlling a skin depth in the electrical conductor by controlling a frequency of the AC applied to the electrical conductor." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1741, in combination with the other features of the claim.

Claim 1742 describes a combination of features including: "controlling the amount of current applied to the electrical conductors to control an amount of heat provided by at least one of the electrically resistive sections." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1742, in combination with the other features of the claim.

Claim 1743 describes a combination of features including: "applying current of at least about 70 amps to the electrical conductor." The cited art does not appear to teach or suggest at least the above-quoted features of claim 1743, in combination with the other features of the claim.

Claims 1744, 1746, and 1748 describe combinations of features including: "wherein the heater well extends at least about 10 m into the hydrocarbon containing layer." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1744, 1746, and 1748, in combination with the other features of the claims.

Claims 1745, 1747, and 1749 describe combinations of features including: "wherein the hydrocarbon containing layer comprises hydrocarbons configured to be treated and produced from the formation using an in situ conversion process." The cited art does not appear to teach or suggest at least the above-quoted features of claims 1745, 1747, and 1749, in combination with the other features of the claims.

C. Provisional Double Patenting Rejections

Claims 1691-1749 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1691-1753 of copending U.S. Pat. Appl. No. 10/693,820 and claims 1691-1759 of copending U.S. Pat. Appl. No. 10/693,840. Upon the present application being in condition for allowance but for the double patenting rejections, Applicant will provide arguments for the inappropriateness of the double patenting rejections and/or provide a terminal disclaimer.

D. Additional Comments

Applicant respectfully requests a one-month extension of time. If any additional

extension of time is necessary, Applicant hereby requests the appropriate extension of time. The appropriate fee will be authorized during electronic filing of this document. If any additional fees are required or if any fees have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5659-21000/EBM.

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Date: May 8, 2008